VOLUME XI

AUTHOR INDEX

Papers and Technical Notes

[Short papers and notes are marked (N) in this index]

Author	*Title*	*Page*
BELFORD, G., L. JACKSON LASLETT, & J. N. SNYDER	Table Pertaining to Solutions of a Hill Equation (N)	79–81
BOLEY, BRUNO A.	A Method for the Numerical Evaluation of Certain Infinite Integrals (N)	261–264
CAMPBELL, EDWIN S.	A Method for Integrating a Set of Ordinary Differential Equations Subject to a Type of Numerical Indeterminacy	229–233
CHAMBERS, LL. G.	Note upon the Numerical Evaluation of Limits of Sequences (N)	19–21
COOK, J. M.	Rational Formulae for the Production of a Spherically Symmetric Probability Distribution (N)	81–82
DIJKSTRA, E. W.	A Method to Investigate Primality (N)	195–196
DOYLE, THOMAS C.	Inversion of Symmetric Coefficient Matrix of Positive-Definite Quadratic Form	55–58
FARRINGTON, C. C., R. T. GREGORY, & A. H. TAUB	On the Numerical Solution of Sturm-Liouville Differential Equations	131–150
FISHMAN, HERBERT	Numerical Integration Constants	1–9
GOOD, I. J.	On the Numerical Solution of Integral Equations (N)	82–83
GREENSPAN, DONALD	On the Numerical Evaluation of the Stokes' Stream Function.	150–160
HAMMER, PRESTON C., & A. WAYNE WYMORE	Numerical Evaluation of Multiple Integrals I	59–67
HARRIS, FRANK E.	Table of the Exponential Integral $Ei(x)$	9–16
HART, ROGER G.	A Formula for the Approximation of Definite Integrals of the Normal Distribution Function (N)	265
HEALY, M. J. R.	A Rotation Method for Computing Canonical Correlations (N)	83–86
HITCHOCK, A. J. M.	Polynomial Approximations to Bessel Functions of Order Zero and One to Related Functions. (N)	86–88
HOLLADAY, JOHN C.	A Smoothest Curve Approximation	233–243
LING, CHIH-BING	Tables of Values of 16 Integrals of Algebraic-Hyperbolic Type.	160–166
LONGMAN, I. M.	Tables for the Rapid and Accurate Numerical Evaluation of Certain Infinite Integrals Involving Bessel Functions	166–180
LUKE, YUDELL L.	On the Computation of log Z and arc tan Z	16–18
MENDELSOHN, N. S.	An Iterative Method for the Solution of Linear Equations Based on the Power Method for Proper Vectors (N)	88–91
MENDELSOHN, N. S.	The Computation of Complex Proper Values and Vectors of a Real Matrix with Application to Polynomials (N)	91–94
MEYER, H. I. & B. J. HOLLINGSWORTH	A Method of Inverting Large Matrices of Special Form (N)	94–97
MILLER, J. C. P.	Note on the General Solution of the Confluent Hypergeometric Equation (N)	97–99
PEIRCE, WILLIAM H.	Numerical Integration over the Spherical Shell	244
ROBINSON, RAPHAEL M.	Factors of Fermat Numbers (N)	21–22
ROBINSON, RAPHAEL M.	Some Factorizations of Numbers of the Form $2^n \pm 1$ (N)	265
SALZER, HERBERT E.	Equally-Weighted Quadrature Formulas for Inversion Integrals (N)	197–200

Author	*Title*	*Page*
SHELDON, J. W., B. ZONDEK, & M. FRIEDMAN	On the Time-Step to be Used for the Computation of Orbits by Numerical Integration	181–189
SMITH, HERSCHEL F.	On a Generalization of the Prime Pair Problem	249–254
SOUTHARD, THOMAS H.	Approximation and Table of the Weierstrass Function in the Equianharmonic Case for Real Argument (N)	99–100
STEGUN, IRENE A. & MILTON ABRAMOWITZ	Generation of Bessel Functions on High Speed Computers	255–257
STROUD, A. H.	Remarks on the Disposition of Points in Numerical Integration Formulas	257–261
THACHER, HENRY C., JR.	Optimum Quadrature Formulas in s Dimensions	189–194
VISWANATHAN, R. V.	Solution of Poisson's Equation by Relaxation Method—Normal Gradient Specified on Curved Boundaries	67–78
WAGNER, HARVEY M.	A Lemma for Automatic Optimum Programming on the IBM 650 (N)	101–104
WARNER, F. J.	On the Solution of "Jury" Problems with Many Degrees of Freedom (N)	268–271
WILF, HERBERT S.	An Open Formula for the Numerical Integration of First Order Differential Equations (N)	201–203
WILKES, M. V. & D. J. WHEELER	Note on "A Method for Computing Certain Inverse Functions" (N)	204

INDEX OF REVIEWS BY AUTHOR OF WORK REVIEWED

Author	*Review Number*	*Page*
Allen, E. E.	36	38
Anderson, Einar	90	212–214
Arndt, D.	119	279–281
Armour Research Fdn. Proc.	94	215–216
Aronson, Milton H.	138	296
Banerjee, D. P.	15	28
Barber, S. W.	120	281
Bateman, Harry	69	117–118
Battin, Richard H.	63	112
Beckenbach, E. F.	124	283–285
Belevitch, V.	78	205–206
Belford, G.	59	110
Bell Aircraft Corp.	86	210
Belousov, S. L.	115	276
Bennett, Albert A.	69	117–118
Bickley, W. G.	133	290–291
Bishop, R. E. D.	89	212
Bodewig, E.	135	292–293
Brombacher, W. G.	104	225
Case, K. M.	126	285–286
Chisnall, G. A.	6	24
Churchill, Stuart W.	116	277
Clark, George C.	116	277
Couffignal, L.	70	118–119
Crandall, S. H.	99	219–221
Crank, J.	71	119–120
Crowder, Harold K.	117	277–279
Dank, M.	120	281
Davis, P.	84	209
Davison, W. R.	30	34
de Haan, D. Bierens	60	111
de Hoffman, F.	126	285–286
Dingle, R. B.	119	279–281
Dodge, H. F.	32	35– 36
Dowgird, Zygmunt	96	216–217
Drew, Thomas B.	40	41–42
Durand, David	17	28
Eckert, W. J.	101	222–224
Elektronische Rechenmaschinen und Informationsverabeitung	142	306–308
Emersleben, O.	56	109–110
Emersleben, O.	65	113
Emersleben, O.	66	114
Erdélyi, A.	67	114–116
Fedorova, R. M.	49	104–106
Ferentz, M.	88	211
Ferentz, M.	127	286
Fieller, E. C.	12	26–27
Fishman, H.	136	293–294
Forsythe, George E.	47	49
Francis, George C.	117	277–279
Franklin Institute Proc.	139	296–298
Fraser, D. A. S.	16	28

Author	Review Number	Page
Fröberg, C. E.	35	37–38
Fröberg, Carl-Erick	82	208
Garcia, Juan	106	272
Gellman, H. S.	64	112–113
Gloden, Albert	109	274
Glowatzki, Ernst	61	111
Godwin, H. J.	51	107
Greenstadt, J.	134	291–292
Greenwood, J. Arthur	17	28–29
Guttman, Irwin	16	28
Haan, D. Bierens de	60	111
Hammer, P. C.	7	24–25
Hannan, E. J.	13	27
Harris, E. L.	130	288
Harris, Frank E.	118	279
Harrison, C.	88	211
Harvard University	11	25–26
Hildebrand, F. B.	98	218
Hodges, J. L., Jr.	22	31
Hoffman, F. de	126	285–286
Hollander, F. H.	58	110
Hoopes, John W., Jr.	40	41–42
Horgan, R. B.	5	24
Horgan, R. B.	10	25
Householder, A. S.	46	49
Ihm, Peter	18	29
Inst. of Elec. Engrs., Proc.	73	121–124
Jeenel, J.	2	22
Jeffreys, Sir Harold	97	217–218
Jeffreys, Lady (Bertha Swirles)	97	217–218
Johnson, Clarence L.	45	48–49
Johnson, D. C.	89	212
Johnston, S.	34	36–37
Jones, Rebecca	101	222–224
Karpov, K. A.	85	209–210
Khrenov, L. S.	79	206
Krarup, Torben	90	212–214
Kruse, F. H.	38	39–40
Kuntz, K. S.	8	25
Laethem, Marvel van	72	120–121
Lanczos, Cornelius	131	288–289
Laning, J. Halcomb, Jr.	63	112
Larrivee, Jules A.	100	221–222
Laslett, L. Jackson	59	110
Lebedev, A. V.	49	104–106
Lebedev, S. A.	74	124–125
Leech, John	110	274
Lehmer, D. H.	108	273
Lehmer, D. H.	114	275–276
Lehmer, D. H.	50	106–107
Lehmer, D. H.	52	107–108
Lehmer, D. H.	102	224
Lehmer, D. N.	107	272–273
Lehmer, Emma	112	275
Leone, F. C.	24	31–32
Lewis, T.	12	26–27
Lieberman, G. J.	31	34–35
Lindman, C. F.	122	282
Lord, F. M.	19	30
McCracken, D. D.	140	298–305
MacDonald, D. K. C.	37	38–39
Maehly, Hans J.	4	24
Magnus, W.	67	114–116
Marlowe, O. J.	7	24–25
Masuyama, Motosabura	20	30
Meyer, H. A.	43	44–46
Miller, L. H.	23	31
Milne, William E.	69	117–118
Moriguti, Sigeiti	25	32
NBS AMS 12	42	43–44
NBS AMS 15	68	116–117
NBS AMS 35	54	108
NBS AMS 41	33	36
Nagler, H.	77	116–117
National Physical Lab.	105	225–226
Neville, E. H.	3	23
Nicholson, S. C.	2	22
Noether, G. E.	14	27–28
Norton, T. R.	39	40–41
Num. Anal.—Proc. 6th Symp. App. Math. AMS	44	46–48
Oberhettinger, F.	67	114–116
Oberhettinger, F.	121	281–282
Opler, A.	39	40–41
Page, E. S.	29	34
Patterson, G. N.	130	288
Pearcey, T.	87	210–211
Pearson, E. S.	12	26–27
Pease, L.	103	225
Pettersen, Sverre	129	287
Placzek, G.	126	285–286
Pode, Leonard	123	282–283
Porter, R. J.	113	275
Powley, Homer S.	81	208
Powley, Homer S.	92	214–215
Proc., 2nd Annual Comp. App. Symposium—Armour Res. Fdn.	94	215–216

Author	Review Number	Page
Proc., Symp. of Franklin Inst.	139	296–298
Proc., Inst. of Elec. Engineers	73	121–124
Proc., 6th Symp. in App. Math.—AMS	44	46–48
Prosen, R. J.	38	39–40
Pyl, Lyman M. van der	104	225
Rabinowitz, P.	84	209
Rahman, A.	125	285
Rahman, A.	128	286
Richards, R. K.	48	50–51
Robinson, R. M.	111	274–275
Rosenthal, Louis	123	282–283
Rosenzweig, N.	127	286
Roy, S. K.	119	279–281
Rutishauser, Heinz	132	289–290
Rybner, Jørgen	80	207
Salzer, H. E.	55	109
Salzer, Herbert E.	9	25
Sampford, M. R.	21	30
Sasaki, T.	62	111–112
Schmidt, Walter	75	204
Scott, J. F.	28	33
Sluckin, W.	141	305–306
Small, V. J.	28	33
Smith, Julian F.	104	225
Smith, Richard B.	95	216
Snyder, J. N.	59	110
Solomon, Herbert	31	34–35
Southard, T. H.	57	110
Sparks, R. A.	38	39–40
Speer Prod. Co.	91	214
Stibitz, George R.	100	221–222
Storer, R. L.	30	34
Storrer, F.	78	205–206
Stroud, A. H.	7	24–25
Svejgaard, Bjarner	90	212–214
Swirles, Bertha (Lady Jeffreys)	97	217–218
Takashima, Michio	27	33
Temple, G.	133	290–291
Tompkins, C. B.	58	110
Topp, C. W.	24	31–32
Towle, Lois T.	37	38–39
Tricomi, F. G.	67	114–116
Triebel, Franz	76	205
Trueblood, K. N.	38	39–40
Uhler, H. S.	1	22
Ura, Shoji	26	32
Vajda, S.	93	215
van der Pyl, Lyman M.	104	225
van Wijngaarden, A.	83	208
Weyl, F. J.	137	294–296
Wijngaarden, A. van	83	208
Wilkes, M. V.	41	42–43
Wilson, W. L.	53	108
Wolfson, J. L.	64	112–113

INDEX OF REVIEWS BY REVIEW NUMBER

Review Number	Author/s	Page
1	H. S. Uhler	22
2	S. C. Nicholson & J. Jeenel	22
3	E. H. Neville	23
4	Hans J Maehly	24
5	R. B. Horgan	24
6	G. A. Chisnall	24
7	P. C. Hammer, O. J. Marlowe, & A. H. Stroud	24–25
8	K. S. Kunz	25
9	Herbert E. Salzer	25
10	R. B. Horgan	25
11	Harvard Univ.	25–26
12	E. C. Fieller, T. Lewis, & E. S. Pearson	26–27
13	E. J. Hannan	27
14	G. E. Noether	27–28
15	D. P. Banerjee	28
16	D. A. S. Fraser & Irwin Guttman	28
17	J. Arthur Greenwood & David Durand	28–29
18	Peter Ihm	29
19	F. M. Lord	30
20	Motosabura Masuyama	30
21	M. R. Sampford	30
22	J. L. Hodges, Jr.	31
23	L. H. Miller	31
24	C. W. Topp & F. C. Leone	31–32
25	Sigeiti Moriguti	32
26	Shoji Ura	32
27	Michio Takashima	33
28	J. F. Scott & V. J. Small	33

Review Number	Author/s	Page
29	E. S. Page	34
30	R. L. Storer & W. R. Davison	34
31	G. J. Lieberman & Herbert Solomon	34–35
32	H. F. Dodge	35–36
33	NBS AMS No. 41	36
34	S. Johnston	36–37
35	C. E. Fröberg	37–38
36	E. E. Allen	38
37	D. K. C. MacDonald & Lois T. Towle	38–39
38	R. A. Sparks, R. J. Prosen, F. H. Kruse, & K. N. Trueblood	39–40
39	T. R. Norton & A. Opler	40–41
40	Thomas B. Drew & John W. Hoopes, Jr.	41–42
41	M. V. Wilkes	42–43
42	NBS AMS No. 12	43–44
43	H. A. Meyer	44–46
44	Num. Anal., Proc., 6th Symp. in App. Math., AMS	46–48
45	Clarence L. Johnson	48–49
46	A. S. Householder	49
47	George E. Forsythe	49
48	R. K. Richards	50–51
49	A. V. Lebedev & R. M. Fedorova	104–106
50	D. H. Lehmer	106–107
51	H. J. Godwin	107
52	D. H. Lehmer	107–108
53	W. L. Wilson, Jr.	108
54	NBS AMS No. 35	108
55	H. E. Salzer	109
56	O. Emersleben	109–110
57	T. H. Southard	110
58	F. H. Hollander & C. B. Tompkins	110
59	G. Belford, L. Jackson Laslett, & J. N. Snyder	110
60	D. Bierens de Haan	111
61	Ernst Glowatzki	111
62	T. Sasaki	111–112
63	J. Halcomb Laning, Jr. & Richard H. Battin	112
64	J. L. Wolfson & H. S. Gellman	112–113
65	O. Emersleben	113–114
66	O. Emersleben	114
67	A. Erdelyi, W. Magnus, F. Oberhettinger, & F. G. Tricomi	114–116
68	NBS AMS No. 15	116–117
69	Albert A. Bennett, William E. Milne, & Harry Bateman	117–118
70	L. Couffignal	118–119
71	J. Crank	119–120
72	Marcel van Laethem	120–121
73	Proc., Inst. of Elec. Engineers	121–124
74	S. A. Lebedev	124–125
75	Walter Schmidt	204–205
76	Franz Triebel	205
77	H. Nagler	205
78	V. Belevitch & F. Storrer	205–206
79	L. S. Khrenov	206
80	Jørgen Rybner	207
81	Homer S. Powley	208
82	Carl-Erik Fröberg	208
83	A. van Wijngaarden	208
84	P. Davis & P. Rabinowitz	209
85	K. A. Karpov	209–210
86	Bell Aircraft Corp.	210
87	T. Pearcey	210–211
88	M. Ferentz & C. Harrison	211
89	R. E. D. Bishop & D. C. Johnson	212
90	Einar Anderson, Torben Krarup, & Bjarner Svejgaard	212–214
91	Speer Prod. Co.	214
92	Homer S. Powley	214–215
93	S. Vajda	215
94	Proc., Second Annual Computer App. Symp.	215–216
95	Richard B. Smith	216
96	Zygmunt Dowgird	216–217
97	Sir Harold Jeffreys & Bertha Swirles	217–218
98	F. B. Hildebrand	218
99	S. H. Crandall	219–221
100	George R. Stibitz & Jules A. Larrivee	221–222
101	W. J. Eckert & Rebecca Jones	222–224
102	D. H. Lehmer	224
103	L. Pease	225
104	W. G. Brombacher, Julian F. Smith, & Lyman M. van der Pyl	225
105	National Phys. Lab.	225–226
106	Juan Garcia	272
107	D. N. Lehmer	272–273
108	D. H. Lehmer	273
109	Albert Gloden	274
110	John Leech	274

Review Number	Author/s	Page
111	R. M. Robinson	274–275
112	Emma Lehmer	275
113	R. J. Porter	275
114	D. H. Lehmer	275–276
115	S. L. Belousov	276
116	George C. Clark & Stuart W. Churchill	277
117	Harold K. Crowder & George C. Francis	277–279
118	Frank E. Harris	279
119	R. B. Dingle, D. Arndt, & S. K. Roy	279–281
120	M. Dank & S. W. Barber	281
121	F. Oberhettinger	281–282
122	C. F. Lindman	282
123	Leonard Pode & Leonard Pode & Louis Rosenthal	282–283
124	E. F. Beckenbach	283–285
125	A. Rahman	285
126	K. M. Case, F. de Hoffman, & G. Placzek	285–286
127	M. Ferentz & N. Rosenzweig	286
128	A. Rahman	286
129	Sverre Pettersen	287
130	E. L. Harris & G. N. Patterson	288
131	Cornelius Lanczos	288–289
132	Heinz Rutishauser	289–290
133	G. Temple & W. G. Bickley	290–291
134	J. Greenstadt	291–292
135	E. Bodewig	292–293
136	H. Fishman	293–294
137	F. J. Weyl	294–296
138	Milton H. Aronson	296
139	Proc. of the Symp. of the Franklin Inst.	296–298
140	D. D. McCracken	298–305
141	W. Sluckin	305–306
142	Elektronische Rechnenmaschinen und Informationsverabeitung	306–308

REVIEWS BY SUBJECT

WORKS ON NUMERICAL ANALYSIS

Author/s	Review Number	Description	Page
Generalities of Numerical Analysis			
Num. Anal. Proc. Sixth Symp. in App. Math., AMS	44	Proceedings, symposium on numerical analysis	46
NBS AMS No. 15	68	*Problems for the Numerical Analysis of the Future*	116
Sir Harold Jeffreys & Bertha Swirles	97	*Methods of Mathematical Physics*	217
F. B. Hildebrand	98	*Advanced Calculus for Engineers*	218
E. F. Beckenbach, Editor	124	*Modern Mathematics for the Engineer*	283
Cornelius Lanczos	131	*Applied Analysis*	288
Heinz Rutishauser	132	Many applications of the quotient-difference algorithm	289
F. J. Weyl	137	*Report on a Survey of Training and Research in Applied Mathematics in the United States*	294
Elektronische Rechnenmaschinen und Informationsverabeitung	142	Report of symposium on electronic computers	306
Approximation			
Hans J. Maehly	4	$\log_2 x$, $\frac{1}{2} \leq x \leq 1$, 10D; 2^x, $-\frac{1}{2} \leq x \leq \frac{1}{2}$, 10D; arc tan x, $-1 \leq x \leq 1$, 9D	24

Author/s	*Review Number*	*Description*	*Page*
E. E. Allen	36	Bessel functions: $I_0(x)$, $-3.75 \leqq x \leqq 3.75$, 8D; $I_0(x)x^{\frac{1}{2}}e^{-x}$, $3.75 \leqq x < \infty$, 7D; $I_1(x)/x$, $-3.75 \leqq x \leqq 3.75$, 8D; $I_1(x)x^{\frac{1}{2}}e^{-x}$, $3.75 \leqq x < \infty$, 7D; $K_0(x) + \log_e(.5x)I_0(x)$, $0 < x \leqq 2$, 7D; $[K_1(x) - \log_e(.5x)I_1(x)]x$, $0 < x \leqq 2$, 7D; $K_0(x)x^{\frac{1}{2}}e^x$, $2 \leqq x < \infty$, 7D; $K_1(x)x^{\frac{1}{2}}e^x$, $2 \leqq x < \infty$, 7D	38
Num. Anal., Proc. Sixth Symp. App. Math., AMS	44	Several papers in proceedings of symposium on numerical analysis	46
T. H. Southard	57	Weierstrass elliptic function, $x^2\mathfrak{P}(x; 0, 1)$, $0 < x \leqq 1.53$, 7S	110
F. H. Hollander & C. B. Tompkins	58	$x^2\mathfrak{P}(x; 0, 1)$ $0 < x \leqq 1.53$, 7S	110
V. Belevitch & F. Storrer	78	Polynomial approximation for automatic computations; approximation to $1/x$, $x^{-\frac{1}{2}}$, sin x, arc tan x, 10^x, $10^x - 1$, $\log_{10}x$ illustrated	206
Cornelius Lanczos	131	Sections of a general book on applied analysis	288
		Interpolation	
G. A. Chisnall	6	Modified j-th differences $j = 2(2)10$ and multipliers for Chebyshev-Everett interpolation	24
NBS AMS No. 35	54	Lagrangian interpolation coefficients, 3 to 6 points, $\theta = 0(1'')60'$, 8D	108
H. E. Salzer	55	Complex osculatory interpolation in a square, 2 to 4 points, p, q, $= 0(.1)1$, exact	109
K. A. Karpov	85	Lagrangian coefficients $A_i(t)$, $i = -1(1)2$, $t = -1(.001)2$ and $i = -2(1)2$, $t = -2(.001)2$, 6D	209
Sir Harold Jeffreys & Bertha Swirles	97	Elementary treatment in book on mathematical physics	217
Cornelius Lanczos	131	Interpolation and smoothing, sections of a book on applied analysis	288
Heinz Rutishauser	132	Quotient-difference algorithm and interpolation by sums of exponentials	289
Elektronische Rechnenmaschinen und Informationsverabeitung	142	Papers, symposium on electronic computers	306
		Extrapolation	
Herbert E. Salzer	9	$A_m(n)$, $m = 4(1)10$, $n = 11(1)50(5)100(10)200(50)500(100)1000$, exact, where S_n, the sum of n terms of a sequence, is estimated by $\Sigma_4^{10} A_m(n)S_m$	25
R. B. Horgan	10	$A_m(n)$, $m = 4(1)10$, $n = 11(1)50(5)100(10)200(50)500(100)1000$, 15D	25
Sir Harold Jeffreys & Bertha Swirles	97	Elementary treatment in book on mathematical physics	217
		Numerical Differentiation	
Sir Harold Jeffreys & Bertha Swirles	97	Elementary treatment in book on mathematical physics	217

Author/s	*Review Number*	*Description*	*Page*
		Numerical Integration, Summation	
P. C. Hammer, O. J. Marlowe, & A. H. Stroud	7	Polynomials q_m^n orthogonal with respect to x^n on (0, 1), $m = 1(1)5$, $n = 1, 2$, and $m = 1(1)4$, $n = 3$; zeros of q_m^n and weights and arguments for numerical quadrature over a triangle, 18S	24
K. S. Kunz	8	$2[S_p - S_{n-p}]\binom{n}{p}^2$ and $\binom{n}{p}^2$, $p = 0(1)6$, $n = 1(1)p$, exact, where $S_r = \Sigma_1^r i^{-4}$; $(2n + 1)!/(n!)$, $n = 1(1)6$, exact	25
O. Emersleben	65	Evaluation of Madelung constants	113
Marcel van Laethem	72	Evaluation of singular integrals	120
P. Davis & P. Rabinowitz	84	Gaussian quadrature with 2, 4, 8, 16, 20, 24, 32, 40, and 48 points, 20D	209
Sir Harold Jeffreys & Bertha Swirles	97	Elementary treatment in book on mathematical physics	217
Cornelius Lanczos	131	Quadratures, etc., sections of a book on applied analysis	288
Heinz Rutishauser	132	Quotient-difference algorithm for slowly convergent series	289
H. Fishman	136	Best values for b_j and x_j in $\int_0^1 x^n g(x)dx \doteq \Sigma_{j=1}^m b_j g(x_j)$, $n = 1(1)5$, $m = 1(1)8$, 12D	293
Elektronische Rechnenmaschinen und Informationsverabeitung	142	Paper in symposium on electronic computers	306
		Variational Methods	
Sir Harold Jeffreys & Bertha Swirles	97	Discussion and application in book on mathematical physics	217
E. F. Beckenbach, Editor	124	Calculus of variations, non-linear methods, some explicit methods (essays)	283
G. Temple & W. G. Bickley	133	*Rayleigh's Principle and its Applications to Engineering. The Theory and Practice of the Energy Method for the Approximate Determination of Critical Loads and Speeds*	290
		Relaxation Methods	
Sir Harold Jeffreys & Bertha Swirles	97	Seidel's method and other examples in book on mathematical physics	217
E. F. Beckenbach, Editor	124	What are relaxation methods, methods of steep descent essays in book on mathematics in engineering	283
Elektronische Rechnenmaschinen und Informationsverabeitung	142	Iterative processes, papers in report of symposium on electronic computers	306
		Mapping Methods	
Sir Harold Jeffreys & Bertha Swirles	97	Conformal mapping, chapter in book on mathematical physics	217
E. F. Beckenbach, Editor	124	Conformal mapping methods, essay in book on mathematics in engineering	283

Author/s	*Review Number*	*Description*	*Page*
		Linear Equations and Matrices	
H. A. Meyer, Editor	43	Monte Carlo methods for matrix inversion, in report of symposium on Monte Carlo	44
Num. Anal., Proc., Sixth Symp. in App. Math., AMS	44	Several papers in report of symposium on numerical analysis	46
L. Couffignal	70	Numerical solution of linear algebraic equations	118
Zygmunt Dowgird	96	Cracovians	216
Sir Harold Jeffreys & Bertha Swirles	97	Classical numerical methods in book on mathematical physics	217
D. H. Lehmer	114	Two classes of matrices and an inversion formula, useful for evaluation of computational methods	275
E. F. Beckenbach, Editor	124	Matrices in engineering, various methods of attacking linear problems, essays in book on mathematics in engineering	283
Cornelius Lanczos	131	Linear algebra and solutions of equations, sections of book on applied analysis	288
Elektronische Rechnenmaschinen und Informationsverabeitung	142	Linear algebra and matrix inversion, papers in report of symposium on electronic computers	306
		Eigenvalue and Eigenvector Problems	
H. A. Meyer, Editor	43	Monte Carlo methods in report on symposium on Monte Carlo	44
Proc., Inst. of Elec. Engineers	73	Eigenvalues and -vectors symmetric matrices, in report of convention on digital computer techniques	121
S. H. Crandall	99	Eigenvalue problems for finite and continuous systems with elementary numerical discussions in text on engineering analysis	219
D. H. Lehmer	114	Two classes of matrices and formulas for computing their powers and eigenvalues, useful for evaluation of computational methods	275
Cornelius Lanczos	131	Spectroscopic and minimized iteration computational methods, sections of a book on applied analysis	288
Heinz Rutishauser	132	Quotient-difference algorithm, to find eigenvalues and eigenvectors of general matrices	289
J. Greenstadt	134	"A method for finding roots of arbitrary matrices"	291
E. Bodewig	135	*Matrix Calculus*	292
		Linear Programming and Games	
H. A. Meyer, Editor	43	Monte Carlo methods in report of symposium on Monte Carlo	44
S. Vajda	93	*The Theory of Games and Linear Programming*	215
A. Rahman	125	Theory of games, theory of dynamic programming, essays in book on mathematics in engineering	285
E. Bodewig	135	*Matrix Calculus*	292
Elektronische Rechnenmaschinen und Informationsverabeitung	142	Linear programming, in report of symposium on electronic computers	306
		Higher Degree Algebraic Equations	
Cornelius Lanczos	131	Sections of book on applied analysis	288
Heinz Rutishauser	132	Quotient-difference algorithm to factor polynomials	289

Author/s	*Review Number*	*Description*	*Page*
		Ordinary Differential Equations	
Albert A. Bennett, William E. Milne, & Harry Bateman	69	*Numerical Integration of Differential Equations*	117
Proc., Inst. of Elec. Engineers	73	Predictor-corrector methods in report of convention on digital computer techniques	121
Sir Harold Jeffreys & Bertha Swirles	97	Methods and applications in book on mathematical physics	217
F. B. Hildebrand	98	Discussion including numerical and series methods in advanced calculus book	218
S. H. Crandall	99	Elementary numerical treatment of equilibrium and propagation problems in text on engineering analysis	219
E. F. Beckenbach, Editor	124	Oscillations, exterior ballistics, essays in book on mathematics in engineering	283
Elektronische Rechnenmaschinen und Informationsverabeitung	142	Non-linear equations, astronomy, in proceedings symposium on electronic computers	306
		Partial Differential Equations	
Num. Anal., Proc. Sixth Symp. in App. Math., AMS	44	Papers in proceedings symposium on numerical analysis	46
W. L. Wilson, Jr.	53	Tables for approximate solution of Laplace's equation	108
J. Crank	71	*The Mathematics of Diffusion*	119
Proc. Inst. of Elec. Eng.	73	Papers in report of convention on digital computer applications	121
Sir Harold Jeffreys & Bertha Swirles	97	Methods and applications in book on mathematical physics	217
F. B. Hildebrand	98	Elementary discussion in advanced calculus text	218
S. H. Crandall	99	Elementary numerical treatment of equilibrium and propagation problems in text on engineering analysis	219
E. F. Beckenbach, Editor	124	Hyperbolic equations and applications, boundary value problems in elliptic equations, elastostatic boundary value problems, essays in book on mathematics in engineering	283
Elektronische Rechnenmaschinen und Informationsverabeitung	142	Hyperbolic equations, hydrodynamics, in proceedings of symposium on electronic computers	306
		Integral Equations	
H. A. Meyer, Editor	43	Monte Carlo methods in proceedings symposium on Monte Carlo	44
Sir Harold Jeffreys & Bertha Swirles	97	Some applications in book on mathematical physics	217
E. F. Beckenbach, Editor	124	Prediction theory, essay in book on mathematics in engineering	283
		Special Functions	
A. Erdélyi, W. Magnus, F. Oberhettinger, & F. G. Tricomi	67	*Higher Transcendental Functions*	114

Author/s	*Review Number*	*Description*	*Page*
Sir Harold Jeffreys & Bertha Swirles	97	Bessel, hypergeometric, Legendre, Γ, and elliptic functions in book on mathematical physics	217
F. G. Hildebrand	98	Elementary discussion, Bessel, Legendre, Γ, hypergeometric functions in advanced calculus book	218
		Asymptotic Expansions	
Sir Harold Jeffreys & Bertha Swirles	97	Chapter in book on mathematical physics	217
		Definite Integrals	
D. Bierens de Haan	60	Table of definite integrals	111
C. F. Lindman	122	Critique of de Haan's tables	282
		Integral Transforms	
Sir Harold Jeffreys & Bertha Swirles	97	Some transform applications in book on mathematical physics	217
F. B. Hildebrand	98	Forty-one Laplace transforms and elementary discussion in advanced calculus book	218
F. Oberhettinger	121	Table of Fourier transforms	281
E. F. Beckenbach, Editor	124	Functional transformations for engineering design, essay in book on mathematics in engineering	283
Cornelius Lanczos	131	Harmonic analysis and related topics sections of a book on applied analysis	
		Sampling, Generating Random Variates, Monte Carlo	
NBS AMS No. 12	42	Proceedings of a symposium on Monte Carlo	43
H. A. Meyer, Editor	43	Proceedings of a symposium on Monte Carlo	44
Proc., Second Annual Computer App. Symp.	94	Machine program for Monte Carlo	215
E. F. Beckenbach, Editor	124	Monte Carlo methods, essay in book on mathematics in engineering	283
		Applications to Chemical Sciences	
Thomas B. Drew & John W. Hoopes, Jr., Editors	40	*Advances in Chemical Engineering*	41
		Bibliographic Works	
A. S. Householder	46	"Bibliography on numerical analysis"	49
George E. Forsythe	47	"Selected references on use of high-speed computers for scientific computation"	49
A. V. Lebedev & R. M. Fedorova	49	Guide to tables	104

TABLES FROM NUMBER THEORY

		Euler's Totient Function and its Inverse, Sum and Generalizations	
E. H. Neville	3	Denominators of Farey Series of order 105	23
		Ordinary Factor Tables	
D. N. Lehmer	107	Factors of N, $0 < N < 100\,17000$, 2, 3, 5, 7 $\nmid N$	272
		Tables of Factors of Numbers of Special Form	
Albert Gloden	109	Factors of $N^4 + 1$, $N = 3001(1)6000$	274

Author/s	*Review Number*	*Description*	*Page*
R. M. Robinson	111	Least factor f of $N = k \cdot 2^n + 1$, $k = 1$, $n < 2272$, $f < 10^8$; $k = 3$, $n < 1280$; $k = 5$, $n < 1536$; $k = 7$, $n < 1280$; $k = 9(2)99$, $n < 512$: $f < 10^4$	274
		Lists of Consecutive Primes	
D. N. Lehmer	107	Primes p, $1 \leqq p \leqq 100\ 06721$	272
John Leech	110	Groups of 4, 5, 6, 7 primes p with closest possible spacing $50 < p < 100\ 17000$	
		Lists of Primes of Special Form	
R. M. Robinson	111	Primality of $N = k \cdot 2^n + 1$, $k = 1$, $n < 2272$; $k = 3$, $n < 1280$; $k = 5$, $n < 1536$; $k = 7$, $n < 1280$; $k = 9(2)99$, $n < 512$	274
		Diophantine Equations of Degree > 2	
D. H. Lehmer	50	Solutions of $x^3 + y^3 + z^3 = 1$	106
		Non-linear Forms, their Classes, and Class Numbers	
R. J. Porter	113	Irregular negative determinants of exponent $3n$ with their critical classes, $50000 \leqq -D \leqq 1{,}00000$	275
		Tables Related to Cyclotomy	
Emma Lehmer	112	Distributions of Gauss sums of orders 3, 4, 5, 7	
		Tables Relating to Algebraic Number Theory	
H. J. Godwin	51	Quartic fields	107
		Other Tables Relating to Analytic Number Theory	
O. Emersleben	56	Some values of Epstein's zeta-function 6D	109
D. H. Lehmer	108	25,000 zeros of $\zeta(s)$	
		Tables for Radix Conversion—Decimal to Radix 2^k and Radix 2^k to Decimal	
Carl-Erik Fröberg	82	Hexadecimal conversions: integers 1(1)1024(16)4096 and $10^k(10^k)10^{k+1}$, $k = 2(1)12$; fractions $x = 10^{-k}(10^{-k})10^{-k+2}$, $k = 2(2)16$; $n \cdot 10^k$, $n = 1(2)9$, $k = 12(1)12$; 10^k and 10^{-k}, $k = 13(1)25$; some constants, all in hexadecimal form. $x = 16^{-k}(16^{-k})16^{-k+1}$, $k = 1(1)10$ in decimal form	208
A. van Wijngaarden	83	Decimal-octal conversion $x = 0(8)99992$; 2^n, $n = 1(1)50$ exact; 2^{-n}, $n = 1(1)50$, 20D. Octal 10^n, $n = 1(1)18$ exact and 10^{-n}, $n = 1(1)18$ to twenty octal digits	208
		TABLES FROM ALGEBRA	
		Tables Involving Marks from Algebras or Arithmetics Other than the Usual Marker Systems	
H. J. Godwin	51	Real quartic fields	107
		Matrices of Real Numbers	
W. L. Wilson, Jr.	53	Inverses to Laplacian operators over triangular grid of $n(n+1)/2$ points, $n = 2(1)7$	108

Author/s	Review Number	Description	Page
Richard B. Smith	95	A_n^{-1} and B_n^{-1}, $n = 2(1)15$, where $a_{ij} = 1$, $a_{ij} = (i + j - 1)^{-1}i = 2(1)n$ and $b_{ij} = (i + j - 1)$	216
D. H. Lehmer	114	Two classes of matrices with elements 0, 1 and formulas for inverse, powers, eigenvalues	275

TABLES FROM ANALYSIS

Multiplication Tables and Proportional Parts

Walter Schmidt	75	$m \cdot n$, $n = 1(1)200$, $m = p + \theta$ where $p = 0(1)100$, $\theta = .1(.1).9$, $\frac{1}{6}$, $\frac{1}{8}$, $\frac{3}{8}$, $\frac{5}{8}$, $\frac{1}{4}$, $\frac{3}{4}$, 1D	204
Franz Triebel	76	mn, $n = 1(1)100$, $m = 1(\frac{1}{4})100$, 2D; also $m = 101(1)1000$, $n = 1(1)100$ exact; also $m = 1(1)300$, $n = \frac{1}{6}, \frac{1}{8}, \frac{3}{8}$, 2D	205

Reciprocals

V. Belevitch & F. Storrer	78	$1/x$, 15S (polynomial approximation)	205

Square Roots and Related Functions

H. Nagler	77	$\sqrt{N}$, $N = 1(1)10000$, 15D	205
V. Belevitch & F. Storrer	78	$x^{-\frac{1}{2}}$, 15S (polynomial approximation)	205

Fractional Powers of Real Numbers

Hans J. Maehly	4	2^x, $-\frac{1}{2} \leq x \leq \frac{1}{2}$, 10D (rational approximation)	24
V. Belevitch & F. Storrer	78	10^x or $10^x - 1$, 15S (polynomial approximation)	205

Factorials and Sub-factorials

H. S. Uhler	1	996! and 1000! exact	22

Binomial Coefficients

J. L. Hodges, Jr.	22	${}^{A+t}C_t$, $A = .5(1)19.5$, $t = 1(1)18$, 7S	31

Constants Involving π

S. C. Nicholson & J. Jeenel	2	π, 3089D	22

Logarithms of Integers, Common Constants, etc.

Frank E. Harris	118	$\log_{10} e$, 24D	279

Euler's Constant γ, $e^{\pm\gamma}$, and Related Constants

Frank E. Harris	118	γ, 24D	279

Definite Integrals

D. Bierens de Haan	60	Definite integrals	111
C. F. Lindman	122	Critique of de Haan's tables	282

Common Logarithms

V. Belevitch & F. Storrer	78	$\log_{10} x$, 15S (polynomial approximation)	205
Juan Garcia	106	$\log n$, $n = 1(1)9999$, 5D with radical interpolation aids	272

Logarithms to Non-decimal Integral Bases

Hans J. Maehly	4	$\log_2 x$, $\frac{1}{2} \leq x \leq 1$, 10D (rational approximation)	24

Author/s	Review Number	Description	Page
Natural Trigonometric Functions with Argument in Radians			
R. B. Horgan	5	Sin x and cos x, $x = n \cdot 10^k$, $n = 1(1)9$, $k = -3(1)1$	24
V. Belevitch & F. Storrer	78	Sin x, 15S (polynomial approximation)	205
Natural Trigonometric Functions with Argument in Time			
L. S. Khrenov	79	Sin x, cos x, tan x, cot x, sec x, csc x $x = 0^h(4^s)3^h$, 5S, Δ and $P.P$; cot x, csc x, $x = 0(.1^s)8^m(1^s)40^m$, 8S; $\sin^2(\frac{1}{2}x)$, $x = 0(4^s)12^h$, 5S	206
Logarithms of Trigonometric Functions with Argument in Degrees, Minutes, Seconds			
Juan Garcia	106	log sin θ, log cos θ, log tan θ, log cot θ, 0°(various)10″(.1″)1′40″(1″)16′40″(10″)10° (20″)80°, etc., 5D with radical interpolation aids	272
Inverse Circular Functions			
Hans J. Maehly	4	arc tan x, $-1 \leq x \leq 1$, 9D (rational approximation)	24
V. Belevitch & F. Storrer	78	arc tan x, 15S (polynomial approximation)	205
Tables Concerning Right-angled Plane Triangles			
E. H. Neville	3	arc tan y/x in degrees, $x = 1(1)105$, $y = 1(1)x$, 13D and in radians $y = 1(1)105$, $x = 1(1)y$, 15D, $r = (x^2 + y^2)^{\frac{1}{2}}$, $x = 1(1)105$, $y = 1(1)x$, 13D, and $\ln r$, $y = 1(1)105$, $x = 1(1)y$, 15D	23
Natural Values of e^x			
Frank E. Harris	118	e^h, $h = .01(.01).05, .1(.1).5, 1$, 25D	279
Natural Values of e^{-x}			
Frank E. Harris	118	e^{-h}, $h = .01(.01).05, .1(.1).5, 1$, 25D	279
Logarithms of Hyperbolic Functions			
Homer S. Powley	81	log cosh x, $x = 10(.5)20(5)40$, 3D	208
Natural Logarithms of Integers			
E. H. Neville	3	$\ln x$, $x = 1(1)160$, 15D; $k \ln 10$, $k = 1(1)20$, 15D	23
Natural Logarithms of Reciprocals, Square Roots, and Other Functions			
M. R. Sampford	21	$x \ln x/1 - x$, $x = 0(.01).99$, 4D	30
Circular and Hyperbolic Functions of Complex Argument, Rectangular Values for Argument and Function			
Jørgen Rybner	80	sinh $(A + iB)$ and cosh $(A + iB)$, $0 \leq A \leq 4$, tanh $(A + iB)$, $0 \leq A \leq 3$ (alignment charts); with several auxiliary functions	207
Exponential Integrals (Ei(x))			
Frank E. Harris	118	Ei(x), $x = 1(1)4(.4)8(1)50$, 18S and e^{-x}Ei(x), x as above, 19D, with interpolation aids	279

Author/s	Review Number	Description	Page
		Exponential Integrals $-\mathrm{Ei}(-x)$	
Frank E. Harris	118	$-\mathrm{Ei}(-x)\cdot x = 1(1)4(.4)8(1)50$, 18S and $-e^x\mathrm{Ei}(-x)$, x as above, 19D, with interpolation aids	279
		The Gamma Function	
F. B. Hildebrand	98	$\Gamma(x)$, $x = 1(.01)1.99$, 4D	218
		The Error Integral, Tables of the Ordinate (the Integrand)	
NBS AMS No. 41	33	$H'(x)$, $x = 0(.0001)1(.001)5.6$(various), 15D	36
		Tables of the Error Integral	
NBS AMS No. 41	33	$H(x)$, $x = 0(.0001)1(.001)5.6$(various), 15D $1 - H(x)$, $x = 4(.01)10$, 8S	36
		Higher Integrals and Derivatives, etc., Involving e^{-x^2}	
Bell Aircraft Corp.	86	Circular normal integrals	210
		$P(R) = \frac{1}{2\pi}\int\int_{x^2+y^2\leq R^2} \exp -[(x-a)^2 + (y-b)^2/2]dydx,$ $R = 0(.01)4.59$, $\sqrt{a^2+b^2} = 0(.01)3$	
		Legendre Polynomials $P_n(\cos\theta)$	
George C. Clark & Stuart W. Churchill	116	$P_n(\cos\theta)$, $n = 1(1)80$, $\theta = 1°(1°)180°$, 6D	277
		Associated Legendre Functions, $P_{nm}(\cos\theta)$, $P_n^m(\cos\theta)$, etc.	
S. L. Belousov	115	$F_n^m(\cos\theta)$ or $\bar{P}_n^m(\cos\theta)$ $= \sqrt{\frac{2n+1}{2}\frac{(n-m)!}{(n+m)!}}P_n^m(\cos\theta)$, $m = 0(1)36$, $n = m(1)56$, $\theta = (2°.5)90°$, 6D	276
		Bessel Functions: Unlimited Order	
Harold K. Crowder & George C. Francis	117	$J_{n+\frac{1}{2}}(x)$ and $Y_{n+\frac{1}{2}}(x) = 1(1)50$, $n = 0(1)$ such that $Y_{n+\frac{1}{2}}(x) < 10^{10} < Y_{n+\frac{1}{2}}(x)$, 9D for $n < x$, 7S for $n \geq x$	277
		Expressions Involving $J_n(x)$ or $Y_n(x)$. Spherical Bessel Functions and Riccati-Bessel Functions	
Harold K. Crowder & George C. Francis	117	$j_n(x) = \sqrt{\frac{\pi}{2x}}J_{n+\frac{1}{2}}(x)$ and $y_n(x) = \sqrt{\frac{\pi}{2x}}Y_{n+\frac{1}{2}}(x)$, $x = 1(1)50$, $n = 0(1)$ such that $Y_{n+\frac{1}{2}}(x) < 10^{10} < Y_{n+\frac{1}{2}}(x)$, 9D for $n < x$, 7S for $n \geq x$	277
		Zeros and Turning Values of Bessel Functions	
F. B. Hildebrand	98	$\alpha_{p,n}$ $n = 1(1)5$, $p = 0(1)5$, 3D, where $J_p(\alpha_{pn}) = 0$	218
		Modified Bessel Functions of the First Kind: Integral Order	
E. E. Allen	36	$I_0(x)$, $-3.75 \leq x \leq 3.75$, 8D (polynomial approximation)	38

Author/s	Review Number	Description	Page
Auxiliary Functions for the Determination of Modified Bessel Functions			
E. E. Allen	36	$I_0(x)$, $-3.75 \leqq x \leqq 3.75$, 8D; $I_0(x)x^{\frac{1}{2}}e^{-x}$, $3.75 \leqq x < \infty$, 7D; $I_1(x)/x$, $-3.75 \leqq x \leqq 3.75$, 8D; $I_1(x)x^{\frac{1}{2}}e^{-x}$, $3.75 \leqq x < \infty$, 7D; $K_0(x) + \log_e(.5x)I_0(x)$, $0 < x \leqq 2$, 7D; $[K_1(x) - \log_e(.5x)I_1(x)]x$, $0 < x \leqq 2$, 7D; $K_0(x)x^{\frac{1}{2}}e^x$, $2 \leqq x < \infty$, 7D; $K_1(x)x^{\frac{1}{2}}e^x$, $2 \leqq x < \infty$, 7D; (polynomial approximations)	38
Fresnel Integrals			
T. Pearcey	87	$C(\sqrt{2x/\pi})$ and $S(\sqrt{2x/\pi})$, $x = 0(.01)1$, 7D, $x = 1(.01)50$, 6D, [3]	210
Integrals Involving Bessel Functions			
J. Arthur Greenwood & David Durand	17	$P(r, n) = r\int_0^\infty [J_0(x)]^n J_1(rx)dx$, $n = 6(1)24$, $r = .5(.5)12(1)n$, 5D	28
M. Ferentz & C. Harrison	88	$x^{-1}\int_0^x J_0(y)dy$, $x = 0(.01)31$, 4D	211
Weierstrassian Elliptic Functions			
T. H. Southard	57	$\frac{\partial}{\partial z}\wp(z; 0, 1) - 1/z^2$, $z = 0(.1).8(.05)1.55$, 7D with δ_m[3]. Also $x^3\frac{\partial}{\partial x}\wp(x; 0, 1)$, $0 < x \leqq 1.53$, 7S (polynomial approximation)	110
F. H. Hollander & C. B. Tompkins	58	$x^3\frac{\partial}{\partial x}\wp(x; 0, 1)$, $0 < x \leqq 1.53$, 7S (polynomial approximation)	110
The Riemannian Zeta Functions			
D. H. Lehmer	52	10,000 zeros of $\zeta(s)$	107
D. H. Lehmer	108	25,000 zeros of $\zeta(s)$	273
Hypergeometric Functions, Confluent Hypergeometric Functions			
C. E. Fröberg	35	Formulas for computation of Coulomb wave functions for untabulated arguments about 5S	37
Debye Functions, Radiation Integrals, Fermi-Divac Functions, etc.			
D. K. C. MacDonald & Lois T. Towle	37	$J_r(x) = \int_0^x \frac{z^r dz}{(e^z - 1)(1 - e^{-z})}$ $r = 2, 3, 4, 6$, $x = .1, .25, .5, 1, 1.2, 1.5, 2(1)6, 8, 10, 13, 20, \infty$, 4 to 6S	38
Miscellaneous Integrals Involving Circular and Exponential Functions			
S. Johnston	34	Sievert's integral, $\int_0^x e^{-A\sec\theta}d\theta$, $A = 0(.5)10$, $x = 0(1°)90°$, about 5S	36
R. B. Dingle, D. Arndt, & S. K. Roy	119	Integrals $(p!)^{-1}\int_0^\infty e^p(e^\epsilon + x)^{-b}e^{-\epsilon}d\epsilon$, $x = 0(.1)1(.2)2(.5)10(1)20$; $a = b = 1$, $p = -.5(.5)4$; $a = 1$, $b = 2$, $p = 0(.5)4$; $a = 2$, $b = 1$, $p = -5(.5)5$; $a = b = 2$, $p = 0(.5)6.5$; mostly 4S	279

Author/s	*Review Number*	*Description*	*Page*
M. Dank & S. W. Barber	120	The function of $\frac{6}{x^3}\int_0^x \frac{\xi^2 d\xi}{e^\xi - 1} - \frac{2x}{e^x - 1}$, $x = 0(.1)9.4$ and $10(.5)16$, 5D	281
		Miscellaneous Functions	
O. Emersleben	56	The Epstein Zeta Function $(p)Z\left\|\begin{matrix}0\\ \frac{1}{2}\end{matrix}\right\|(p)$, $p = 1(1)4(2)8$, 6D; $Z\left\|\begin{matrix}0&0\\ p&q\end{matrix}\right\|(2)$, $(p, q) = (0, \frac{1}{2})$, $(\frac{1}{4}, \frac{1}{4})$, $(\frac{1}{3}, \frac{1}{3})$, $(0, \frac{1}{5})$, $(\frac{1}{6}, \frac{1}{6})$, $(\frac{1}{6}, \frac{1}{2})$, $(\frac{1}{6}, \frac{1}{3})$, 6D; $Z\left\|\begin{matrix}0&0&0\\ p&p&p\end{matrix}\right\|(1)$, $p = \frac{1}{3}, \frac{1}{4}$, 6D; $Z\left\|\begin{matrix}0\\ \frac{1}{3}\end{matrix}\right\|(1)$, 6D	109
F. H. Hollander & C. B. Tompkins	58	Solutions of $y'' + (A + B\cos 2t + C\cos 4t + D\cos 6t)Y = 0$, for $A = -.5(.1) -.2(.05) -.15(.03).15(.05).2(.1).5$, $B = 0(.2).8(.1)1.6(.2)2$; $C = 0$, $D = -.05(.05).10$ and $C = -.5(.1).5$, $D = 0$, about 6D	110
G. Belford, L. Jackson Laslett, & J. N. Snyder	59	Solutions of Hill equations	110
Ernst Glowatzki	61	$a_m = (\sin\theta)^{\frac{1}{2}} sn(mK/n; \sin\theta)$, 6D, $\Delta = a_n^{\epsilon}\Pi a_{2r-1}^2$ with $\epsilon = -1$ for n odd and $\epsilon = 0$ for n even, 6S, $-\ln\Delta$, 3D, $\theta = 0(1°)90°$, $m = 1(1)n$, $n = 1(1)12$	111
A. Rahman	125	Integrals $\int_1^\infty \left(\frac{1}{2}\ln\frac{\lambda+1}{\lambda-1}\right)^\epsilon \lambda^n e^{-\alpha\lambda} d\lambda$, $\epsilon = 0, 1$, $n = 0(1)10$, $\alpha = .1(.1)3$, 10S	285
		Interpolation Coefficients and Formulas	
G. A. Chisnall	6	Modified j-th differences, $j = 2(2)10$ and multipliers for Chebyshev-Everett interpolation	24
NBS AMS No. 35	54	Lagrangian interpolation coefficients, 3 to 6 points, $\theta = 0(1'')60'$, 8D	108
H. E. Salzer	55	Complex osculatory interpolation in a square, 2 to 4 points, $p, q = 0(.1)1$, exact	109
K. A. Karpov	85	Lagrangian coefficients $A_i(t)$, $i = -1(1)2$, $t = -1(.001)2$ and $i = -2(1)2$, $t = -2(.001)2$, 6D	209
Frank E. Harris	118	$R_n(h) = n![1 - e^{-h}\Sigma_{k=0}^n h^k/k!]$, $h = .01(.01).05$, $.1(.1).5$, 1, values of n and precision as needed for interpolating $\mathrm{Ei}(x)$ $4 < \|x\| < 50$, 18S	279
		Extrapolations	
Herbert E. Salzer	9	$A_m(n)\cdot m = 4(1)10$, $n = 11(1)50(5)100(10)200(50)500(100)1000$, exact, where S_n, the sum of n terms of a sequence, is estimated by $\Sigma_4^{10} A_m(n) S_n$	25
R. B. Horgan	10	$A_m(n)$, $n = 4(1)10$, $n = 11(1)50(5)100(10)200(50)500(100)1000$, 15D	25
		Coefficients for Integration and Summation Using Ordinates	
P. Davis & P. Rabinowitz	84	Abscissas and weights for Gaussian quadrature with 2, 4, 8, 16, 20, 24, 32, 40, and 48 points, 20D	209

Author/s	Review Number	Description	Page
H. Fishman	136	Best values for b_j and x_j in $\int_0^1 x^n g(x)dx \doteq \sum_{j=1}^m b_j g(x_j)$, $n = 1(1)5$, $n = 1(1)8$, 12D	293
Coefficients for Integration and Summation using Differences			
K. S. Kunz	8	$2[S_p - S_{n-p}]\binom{n}{p}^2$ and $\binom{n}{p}^2$, $p = 0(1)6$, $n = 1(1)p$, exact; where $S_r = \sum_1^r i^{-1}(2n+1)!/(n!)$, $n = 1(1)6$, exact	25
Numerical Integration, Multiple Integrals			
P. C. Hammer, O. J. Marlowe, & A. H. Stroud	7	Polynomials q_m^n orthogonal with respect to x^n on $(D, 1)$, $m = 1(1)5$, $n = 1, 2$ and $m = 1(1)4$, $n = 3$; zeros of q_m^n and weights and arguments for numerical quadrature over a triangle, 18S	24
Bibliographic Material Relating to Tables from Analysis			
A. V. Lebedev & R. M. Fedorova	49	Guide to tables	104

TABLES FROM STATISTICS

Normal Distribution. Area, log Area and Ordinates as Function of $x/\sqrt{2}$			
NBS AMS No. 41	33	$H(x) = \frac{2}{\sqrt{\pi}}\int_0^x e^{-\alpha^2}d\alpha$ and $H'(x) = \frac{2}{\sqrt{\pi}}e^{-x^2}$, $x = 0(.0001)1(.001)5.6$(various), 15D and $1 - H(x)$, $x = 4(.01)10$, 8S	36
Normal Distribution. Measures of Location and Dispersion other than the Standard Deviation			
G. E. Noether	14	For subsample of size N, factors to estimate σ from range, 3S and to give 90% and 98% confidence limits, 2D, $N = 2(1)100$	27
D. P. Banerjee	15	80, 90, 95, and 99% points	28
D. A. S. Fraser & Irwin Guttman	16	Tolerance region factors, k variates $k = 1(1)4$, $n - k = 1(1)30, 40, 60, 120, \infty$, $\beta = .75, .9, .95, .975, .99, .995$, 4S	28
Normal Bivariate Distribution			
Peter Ihm	18	A 3D table for 95% and 99% confidence that a sample from bivariate normal distribution indicates $\sigma_1 - \sigma_2 = \rho = 0$	29
Bell Aircraft Corp.	86	Circular normal integrals $P(R) = \frac{1}{2\pi}\iint_{x^2+y^2=R^2} \exp -[(x-a)^2 + (y-b)^2]/2dydx$, $R = 0(.01)4.59$, $\sqrt{a^2+b^2} = 0(.01)3$, 5D	210

Author/s	Review Number	Description	Page
Normal Distribution. Miscellanea—Quality Control			
R. L. Storrer & W. R. Davison	30	k, 2D and F, 3D, for quality levels of .065, .1, .15, .25, .4, .65, 1, 1.5, 2.5, 4, 6.5% and sample sizes 5(5)40, 50, 70, 130, 200 for inspection by average range and sample standard deviation, one and two sided specifications U and L such as $\bar{X} + k\bar{R} \leqq U$, or Max allowable average range $= F(U - L)$	34
G. J. Lieberman & Herbert Solomon	31	"Multi-level continuous sampling plans"	34
H. F. Dodge	32	"Chain sampling inspection plan"	35
Auxiliary Tables for Estimates or Tests Involving Γ Variates			
Sigeiti Moriguti	25	99.9% confidence limits for a variance component connected with χ^2 distributions with degrees of freedom $f = 6(2)12, 15, 20, 30, 60$ and $f_1 = 1(1)6(2)12, 15, 20, 30, 60, \infty$, 4S or 3D	32
Cumulative Binomial Series, Tail Area of $I_x(a, b)$			
Harvard University	11	Cumulative binomial distributions $E(n, r, p) = \Sigma_{x=r}^{n}\binom{n}{x}p^x(1-p)^{n-r}$, $r = 0(1)n$, $p = .01(.01).5$, $1/16$, $1/12$, $1/8$, $1/6$, $3/16$, $5/16$, $1/3$, $3/8$, $5/12$, $7/16$, $n = 1(1)50(2)100(10)200(20)500(50)1000$, 5D	25
Percentage Points of $I_x(a, b)$. Confidence Belts for Binomial Distribution			
Motosabura Mauyama	20	5% and 1% control limits for limits for r-th order observations, $N = 3(1)6(2)10$, $r = 1(1)N$	30
The Beta Function, Moments of Binomial Distribution, Moments of $I_x(a, b)$			
J. L. Hodges, Jr.	22	${}^{A+t}C_t$, $A = .5(1)19.5$, $t = 1(1)18$, 7S	31
Shoji Ura	26	$\psi = [(f_1 + 1)/f_2]^{\frac{1}{2}}\varphi$, $f_1 = 1(1)10, 12, 15, 20, 24, 30, 60, 120, \infty$, $f_2 = 2(2)20, 24, 30, 40, 60, 120, \infty$, 2D, where φ is Tang-Lehmer power function, with significance level .05 error probability.1	32
Miscellaneous Functions Based on the Binomial Distribution			
J. L. Hodges, Jr.	22	${}^{A+t}C_t$, $A = .5(1)19.5$, $t = 1(1)18$, 7S	31
Tables of F-Distributions and Multivariate Variance Tests			
D. P. Banerjee	15	80, 90, 95, and 99% points of sample standard deviations, normal bivariate universe, $N = 3(1)30$, $\rho = 0(.1).9$, where ρ is the universe correlation coefficient	28
Miscellaneous Continuous Distributions			
L. H. Miller	23	e such that $\alpha =$ Prob $(D_n \geqq e)$, $\alpha = .005, .01, .025, .05, .1$, $N = 1(1)100$, where S_n is observed, F true distributions, $D_n = \max\{S_n(x) - F(x)\}$	31
Geometric Probability Distributions			
J. Arthur Greenwood & David Durand	17	Distributions of $R_n = [(E_{\nu=1}^{n}\cos\xi_\nu)^2 + (\Sigma_{\nu=1}^{n}\sin\xi_\nu)^2]^{\frac{1}{2}}$, where ξ_ν is uniform variate $(0, 2\pi)$, $n = 6(1)24$, $R_n \leqq .5(.5)12(1)n$, 5D. Also 95% and 99% points, 3D, etc.	28

Author/s	Review Number	Description	Page
Distribution of Serial Correlations and Related Statistics			
E. J. Hannon	13	The following functions for testing correlation between time series. $\frac{(1+\rho_1\rho_2)(1-\rho_2^2)}{(1-\rho_1\rho_2)(1-\rho_1^2)}$ and $\frac{(1-\rho_1^2\rho_2^2)(1+\rho_1\rho_2)^2}{2(1-\rho_1^4)(1-\rho_2^4)}$, $\rho_1, \rho_2 = -.8(.2).8$, 2D, and $\frac{(1+\rho_1\rho_2-b)^2[1+\rho_1\rho_2-b(\rho_1^2+\rho_1\rho_2)][1-\rho_1\rho_2-b(\rho_1\rho_2-\rho_1^2)]}{2(1-\rho_1^4)(1-\rho_2^2)(1-b)[1+\rho_2^2-b(1-\rho_2^2)]}$ $b = -.6(.2).6$, $\rho_1, \rho_2 = .6, .8$, and $\rho_1 = \rho_2 = .4$, 2D	27
J. F. Scott & V. J. Small	28	Tables for regression coefficient between trend reduced time series approximately Markoff	33
Multiple Correlation Coefficients			
F. M. Lord	19	$R_{1.23} = \{r_{12}^2 + r_{13}^2 - 2r_{12}r_{13}r_{23})/1 - r_{23}^2)\}^{\frac{1}{2}}$ (nomograph)	30
Non-parametric Two Sample and Analysis of Variance Randomization Tests			
E. S. Page	29	5 and 1% points for $m = \max_{0\le i\le n}\{S_r - \min_{0\le i<r} S_i\}$, $S_r = \Sigma_i^r \operatorname{sgn}(x_i - \theta)$, x_i symmetric about θ, 27 values of n $21 \le n \le 118$. Power comparisons with sign test	34
Runs			
Michio Takashima	27	t_α and (t_α), $\alpha = .01, .05$, $m, n = 1(1)25$, exact, where t_α and (t_α) are smallest integers giving probability $\le\alpha$ of run of length t classes of either or selected one of two classes of objects	33
Tables Relating to Efficiency and Goodness of Fit			
M. R. Sampford	21	Efficiencies of moment method for fitting truncated negative binomial distribution, $k = .5, 1(1)5$, $p = .5, 1, 2, 5$, 3S	30
Miscellaneous Tables Relating to Fitting of Frequency Distributions, Moments of Moments and Cumulants, Means from Non-normal Parents, etc.			
C. W. Topp & F. C. Leone	24	α_3^2 and δ, $b = 1$, $r = .01, .02, .05, .08, .09, .1(.05).95$, $a = .05(.05)1$, where α_3 is 3rd moment, $\delta = (2\alpha_4 - 3\alpha_3^2 - 6)(\alpha_4 + 3)^{-1}$ of $F(x) = \frac{a}{b^{3r}}(2bx - x^2)^r + (1-a)\frac{x}{b}$, $x \in [0, 1]$	31
Random Deviates from Mechanical Devices—Quasi Random Numbers			
NBS AMS No. 12	42	Methods of generation and test	43
H. A. Meyer	43	Generation and test	44
Random Normal Deviates			
E. C. Fieller, T. Lewis, & E. S. Pearson	12	$x_{\alpha i}$, $\alpha = 0(.1).9$, $i = 1(1)3{,}000$ where $x_{\alpha i} \in N(0, 1)$ and $\alpha \ne 0$ is correlation coefficient between x_{0i} and $x_{\alpha i}$, 2D	26

Author/s	Review Number	Description	Page
Bibliographic Material Relating to Statistical Tables			
A. V. Lebedev & R. M. Fedorova	49	*Guide to Mathematical Tables*	104

TABLES FROM PHYSICAL SCIENCES

General References			
G. Belford, L. Jackson Laslett, & J. N. Snyder	59	Solutions of Hill equations	110
Sir Harold Jeffreys & Bertha Swirles	97	*Methods of Mathematical Physics*	217
E. F. Beckenbach, Editor	124	*Modern Mathematics for the Engineer*	
A. Rahman	125	*Tables of Integrals* $A_n(\alpha) = \int_1^\infty \lambda^n e^{-\alpha\lambda} d\lambda$ and $F_n(\alpha) = \int_1^\infty Q_0(\lambda)\lambda^n e^{-\alpha\lambda} d\lambda$	285
Particle Mechanics			
F. H. Hollander & C. B. Tompkins	58	Solutions of $y'' + (A + B \cos 2t + C \cos 4t + D \cos 6t)Y = 0$, for $A = -.5(.1) - .2(.05) - .15(.03).15(.05).2(.1).5$, $B = 0(.2).8(.1)1.6(.2)2$; $C = 0, D = -.05(.05).10$ and $C = -.5(.1).5$, $D = 0$, about 6D	110
G. Belford, L. Jackson Laslett, & J. N. Snyder	59	Solutions of Hill equations	110
Marcel van Laethem	72	Ion trajectories in cylindrical condensor	120
Speer Products Co.	91	Ballistic slide rule	214
Homer S. Powley	92	Ballistic functions $AV^3/700^3$, log V/u, N for $Z =$ 20000(1000)45000 and 50000, 2D, 4D, and 2D respectively	214
E. F. Beckenbach, Editor	124	Exterior ballistics (essay)	283
Mechanics of Rigid and Deformable Bodies			
R. E. D. Bishop & D. C. Johnson	89	*Vibration Analysis Tables*	212
Zygmunt Dowgird	96	Cracovians	216
Fluid Mechanics			
Leonard Pode and Leonard Pode & Louis Rosenthal	123	Tables concerning equilibrium configuration of a flexible cable in a steady stream	282
E. L. Harris & G. N. Patterson	130	Boltzmann's H for gas with a shock wave, Mach 1.5, 2, 2.3238, 3, 3.3764, 4	288
Geophysics			
Einar Anderson, Torben Krarup, & Bjarner Svejgaard	90	*Geodetic Tables, International Ellipsoid*	212
Sverre Petterssen	129	*Weather Analysis and Forecasting*	287

Author/s	Review Number	Description	Page
Thermodynamics, Statistical Mechanics, etc.			
M. Dank & S. W. Barber	120	Specific heat function $\frac{C_2}{C_\infty} = \frac{6}{x^3}\int_0^x \frac{\xi^3 d\xi}{e^\xi - 1} - \frac{2x}{e^x - 1}$, $x = 0(.1)9.4$ and $10(.5)16$, 5D	281
Exchanges, Reaction Kinetics, Reaction Rates, etc.			
J. Crank	71	*The Mathematics of Diffusion*	119
Electricity and Magnetism; Electric Waves; Electric Filters			
Ernst Glowatzki	61	Cauer parameters $\theta = 0(1°)90°$, $m = 1(1)n$, $n = 1(1)12$; a_m to 6D, Δ to 6S, $-\ln \Delta$ to 3D	111
T. Sasaki	62	Coastal bending of radio waves	111
Jørgen Rybner	80	$\sinh (A + iB)$ and $\cosh (A + iB)$, $0 \leq A \leq 4$; $\tanh (A + iB)$, $0 \leq A \leq 3$ (alignment charts); several auxiliary functions for filter design	207
R. B. Dingle, D. Arndt, & S. K. Roy	119	Integrals $(p!)^{-1}\int_0^\infty e^a(e^\epsilon + x)^{-b}\epsilon^{-c}d\epsilon$, $x = 0(.1)1(.2)2(.5)10(1)20$; $a = b = 1$, $p = -.5(.5)4$; $a = 1, b = 2$, $p = 0(.5)4$; $a = 2, b = 1$, $p = -.5(.5)5$; $a = b = 2$, $p = 0(.5)6.5$, mostly 4S for application to semi-conductors	279
Crystal Structure, X-ray Diffraction, Electron Microscopy			
R. A. Sparks, R. J. Prosen, F. H. Kruse, & K. N. Trueblood	38	Summary description of automatic computer codes for crystal structure calculations	39
O. Emersleben	65	Madelung constants	113
O. Emersleben	66	Madelung constants	114
Atomic and Molecular Physics and Chemistry, Quantum Mechanics			
D. K. C. MacDonald & Lois T. Towle	37	$Jr(x) = \int_0^x \frac{z^r dz}{(e^z - 1)(1 - e^{-z})}$, $r = 2, 3, 4, 6$, $x = .1, .25, .5, 1, 1.2, 1.5, 2(1)6, 8, 10, 13, 20, \infty$, 4 to 6S	38
Frank E. Harris	118	$\mathrm{Ei}(x)$, $4 < \lvert x \rvert < 50$, 18S	279
A. Rahman	125	Integrals $\int_1^\infty \left(\frac{1}{\lambda}\ln\frac{\lambda+1}{\lambda-1}\right)^\epsilon \lambda^n e^{-\alpha\lambda} d\lambda$, $\epsilon = 0, 1$, $n = 0(1)10$, $\alpha = .1(.1)3$, 10S, for calculating wave function of hydrogen molecules	285
A. Rahman	128	Integrals from $2s$ and $2p$ atomic functions, 5D	286
Nuclear Physics and Scattering (Including Photon Scattering and Compton Effect)			
C. E. Fröberg	35	Formulas for computation of Coulomb wave functions for untabulated arguments, about 5S	37
H. A. Meyer	43	Monte Carlo methods	44
J. L. Wolfson & H. S. Gellman	64	Electron kinetic energy for momentum $B_s = 100(1)2000(10)10000(100)20000$ Gauss-cm, 5S, *PP*	112

Author/s	Review Number	Description	Page
K. M. Case, F. de Hoffman & G. Placzek	126	Theory of neutron diffusion with some tables	285
M. Frentz & N. Rosenzweig	127	$F_k(L, L', j', j)$, 8D, for 13,602 values of arguments	286

WORKS CONCERNING SOCIAL SCIENCES

Operations Research, Simulation

E. F. Beckenbach, Editor	124	Applied mathematics in operations research, Monte Carlo methods (essays)	283

Econometrics

J. Halcomb Laning, Jr. & Richard H. Battin	63	*Random Processes in Automatic Control*	112
S. Vajda	93	*The Theory of Games and Linear Programming*	215
Proc., Second Annual Computer App. Symp.	94	Linear programming	215
E. F. Beckenbach, Editor	124	Dynamic programming (essay)	283

Management Science (for Programming see Econometrics)

Proc., Second Annual Computer App. Symp.	94	Symposium proceedings	215
National Phys. Lab.	105	*Wage Accounting by Electronic Computer*	225

Learning Theory, Psychometrics, etc.

W. Sluckin	141	*Mind and Machines*	305

Competition, Attention, Warfare, etc.

S. Vajda	93	*The Theory of Games and Linear Programming*	215
E. F. Beckenbach, Editor	124	Theory of games (essay)	283

Translation, Pattern Recognition

Proc., Inst. of Elec. Engineers	73	Conference report, several papers on mechanical translation and on character recognition	121

Biological Applications

S. Johnston	34	Sievert's Integral, $\int_0^\pi e^{-A \sec\theta} d\theta$, $A = 0(.5)10$, $x = 0(1°)90°$, about 5S	36

AUTOMATIC COMPUTATION

General Works on Automatic Computation

M. V. Wilkes	41	*Automatic Digital Computers*	42
Clarence L. Johnson	45	*Analog Computer Techniques*	48
Proc., Inst. Elec. Engineers	73	Report of convention on digital computer techniques	121
S. A. Lebedev	74	*Electronic Computing Machines and Information Processes*, pamphlet	124
George R. Stibitz & Jules A. Larrivee	100	*Mathematics and Computers*	221

Author/s	Review Number	Description	Page
W. J. Eckert & Rebecca Jones	101	*Faster, Faster*	222
E. F. Beckenbach, Editor	124	High speed computing devices and their applications, essay in book on mathematics in engineering	283
Heinz Rutishauser	132	Applications of the quotient-difference-algorithm	289
F. J. Weyl	137	*Report on a Survey of Training and Research in Applied Mathematics in the United States*	294
Milton H. Aronson	138	*The Computer Handbook*, general articles on digital and analogue computing	296
Elektronische Rechnenmaschinen und Informationsverabeitung	142	Report of symposium on electronic computers	306
Radix Conversion—Decimal to Radix 2^k and Radix 2^k to Decimal			
Carl-Erik Fröberg	82	Hexadecimal conversions: integers $1(1)1024(16)4096$ and $10^k(10^k)10^{k+1}$, $k = 2(1)12$; fractions $x = 10^{-k}(10^{-k})10^{-k+2}$, $k = 2(2)16$; $n\cdot 10^k$, $n = 1(2)9$, $k = 12(1)12$; 10^k and 10^{-k}, $k = 13(1)25$; some constants, all in hexadecimal form. $x = 16^{-k}(16^{-k})16^{-k+1}$, $k = 1(1)10$ in decimal form	208
A. van Wijngaarden	83	Decimal octal conversion $x = 0(8)99992$; 2^n, $n = 1(1)50$ exact; 2^{-n}, $n = 1(1)50$, 20D. Octal 10^n, $n = 1(1)18$ exact and 10^{-n}, $n = 1(1)18$ to twenty octal digits	208
Analogue-Digital Conversion			
Proc., Inst. Elec. Engineers	73	Papers in report of convention on digital computer techniques	121
Logic of Coding			
Proc., Inst. Elec. Engineers	73	General coding strategy	121
Proc., Symposium of Franklin Institute	139	Proceedings of a symposium on automatic coding	296
D. D. McCracken	140	*Digital Computer Programming*, a text book	298
Elektronische Rechnenmaschinen und Informationsverabeitung	142	Parts of report of symposium on electronic computers	306
Rational Approximations			
Hans J. Maehly	4	$\log_2 x$, $\frac{1}{2} \leq x \leq 1$, 10D; 2^x, $-\frac{1}{2} \leq x \leq \frac{1}{2}$, 10D; arc tan x, $-1 \leq x \leq 1$, 9D	24
E. E. Allen	36	Bessel functions: $I_0(x)$, $-3.75 \leq x \leq 3.75$, 8D; $I_1(x)/x$, $-3.75 \leq x \leq 3.75$, 8D; $I_0(x)x^{\frac{1}{2}}e^{-x}$, $3.75 \leq x < \infty$, 7D; $K_0(x) + \log_e(.5x)I_0(x)$, $0 < x \leq 2$, 7D; $[K_1(x) - \log_e(.5x)I_1(x)]x$, $0 < x \leq 2$, 7D; $K_0(x)x^{\frac{1}{2}}e^x$, $2 \leq x < \infty$, 7D: $K_1(x)x^{\frac{1}{2}}e^x$, $2 \leq x < \infty$, 7D, polynomial	38
T. H. Southard	57	Weierstrass elliptic function, $x^2\mathfrak{P}(x, 0, 1)$, $0 < x \leq 1.53$ 7S	110
F. H. Hollander & C. B. Tompkins	58	$x^2\mathfrak{P}(x, 0, 1)$, $0 < x \leq 1.53$, 7S	110

Author/s	*Review Number*	*Description*	*Page*
V. Belevitch & F. Storrer	78	x^{-1}, $x^{-\frac{1}{2}}$, sin x, arc tan x, 10^x, $10^x - 1$, $\log_{10} x$, 15S, polynomial	205
		General Aspects of Machine Design	
R. K. Richards	48	*Arithmetic Operations in Digital Computers*	50
J. Halcomb Laning, Jr. & Richard H. Battin	63	*Random Processes in Automatic Control*	112
Proc., Inst. Elec. Engineers	73	Papers in report of convention on digital computing techniques	121
W. Sluckin	141	*Mind and Machines*	305
Elektronische Rechnenmaschinen und Informationsverabeitung	142	Papers in proceedings of symposium on digital computers	306
		Machine Descriptions—Specific Electronic Machines	
Proc., Inst. Elec. Engineers	73	DEUCE, MERCURY, PEGASUS, ELLIOTT 400 series, HEC, IBM 650, 704, 705, MANCHESTER MARK II, NICHOLAS, EDSAC II, IMP, ACE, BESM, in report of convention on digital computer techniques	121
S. A. Lebedev	74	BESM	124
W. J. Eckert & Rebecca Jones	101	NORC	222
Elektronische Rechnenmaschinen und Informationsverabeitung	142	Vienna Logical Function Comp., IRSIA-FNRS, SAPO, Dresden D1, PERM, DERA, WETZLER Z5, Göttingen G1, G2, G3, PTERA, ARRA, ARMAC, BESK, ENMETH, IBM 705, BESM, URAL, in report of symposium on electronic computers	306
		Machine Programs and Codes for Specific Problems	
R. A. Sparks, R. J. Prosen, F. H. Kruse, & K. N. Trueblood	38	Crystallographic calculations	39
T. R. Norton & A. Opler	39	Mechanized search for organic compounds	40
Num. Anal., Proc., Sixth Symp. in App. Math. AMS	44	Generation of permutations	46
Proc., Inst. Elec. Engineers	73	Several problems considered in convention on digital computer techniques	121
Proc., Second Ann. Computer App. Symp.	94	Several papers in computer applications symposium	215
D. H. Lehmer	102	"Sorting cards with respect to a modulus"	224
L. Pease	103	Control board for IBM 602A calculating punch	225
Sverre Pettersen	129	Numerical weather forecasting	
		Computing Bibliography	
George E. Forsythe	47	"Selected references on use of high-speed computers for scientific computation"	49
W. G. Brombacher, Julian F. Smith, & Lyman M. van der Pyl	104	*Guide to Instrumentation Literature*	225

TABLE ERRATA

No.	Author	Title	Page
252	A. A. Abramov	*Tablitsy* ln Γ[*z*] *v Kompleksnoĭ Oblasti*	125
253	Akademiia Nauk SSSR	*Desiatiéna Tablítsy logarifmov kompleksnykh chisel i perekhoda ot dekartovykh koordinat k poliarnym. Tablítsy funktsiĭ*	125–126
254	Akademiia Nauk SSSR	*Tablítsy Integralov Frenalia*	126
255	Isabelle Arsham	*Chebyshev Coefficients for Chebyshev Polynomials of Orders 12 and 24 under the General Linear Transformation (U)*	126–127
256	George Wellington Spenceley, Rheba Murray Spenceley, & Eugene Rhodes Epperson	*Smithsonian Logarithmic Tables to Base e and Base 10*	226
257	C. A. Coulson & W. E. Duncanson	"Some new values for the exponential integral"	308
258	Carl-Erik Fröberg	*Hexadecimal Conversion Tables*	309

Also see the following reviews:

27	Michio Takashima	"Tables for testing randomness by means of lengths of runs"	33
37	D. K. C. MacDonald & Lois T. Towle	"Integrals of interest in metallic conductivity"	38–39
77	H. Nagler	*Table of Square Roots of Integers*	205
80	Jørgen Rybner	*Nomogrammer over komplekse hyperbolske funktioner*	207
82	Carl-Erik Fröberg	*Hexadecimal Conversion Tables*	208
87	T. Pearcey	*Table of the Fresnel Integral to Six Decimal Places*	210–211
107	D. N. Lehmer	*List of Prime Numbers from 1 to 10006721*	272
119	R. B. Dingle, D. Arndt, & S. K. Roy	"The integrals $A_p(x) = (p!)^{-1}\int_0^\infty e^p(\epsilon + z)^{-1}e^{-\epsilon}d\epsilon$ and $B_p(x) = (p!)^{-1}\int_0^\infty e^p(\epsilon + x)^{-2}e^{-\epsilon}d\epsilon$	279

NOTES

Societa Italiana per il progresso delle scienze 51–52
Sir Edmund Whittaker—1873–1956 53–54
John von Neumann—1903–1957 127–128
NBS–NSF Training Program 129
Wayne State University—Conference on Matrix Computations 129
Handbook of Mathematical Tables—National Bureau of Standards 226–227
International Congress of Mathematicians—August 14–21, 1958 227–228
N.P.L. Mathematical Table Series 228
Acknowledgements to Referees 309
The Illinois Journal of Mathematics 309
Policy Committee for Mathematics Technical Advisory Committee to the National Bureau of Standards—Annual Report, May, 1957 310
Index 313

CORRIGENDA

TO PAPERS:

Authors	Title	Page
Mark Lotkin	"A set of test matrices"	130
D. R. Morrison	"A method for computing certain inverse functions"	314

No.	*Author*	*Title*	*Page*
TO REVIEWS:			
	HARVARD UNIVERSITY	*Tables of the Function arc sin z*	129
	Numerical Analysis, v. 6	*Proc. of the Sixth Symp. in App. Math., AMS*	228
	M. SCHULER & H. GEBELEIN	*Acht- und neunstellige Tabellen zu den elliptischen Funktionen*	130
	G. W. THOMSON	"Bounds for the ratio of range to standard deivation"	54
	C. W. TOPP & F. C. LEONE	"A family of *J*-shaped frequency functions"	314